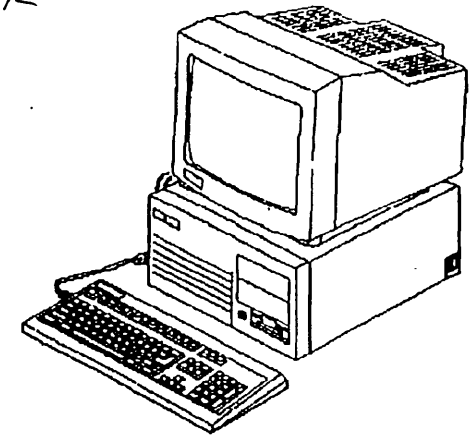


CC598 Support Package Software Release Bulletin

Control Data Corporation

Level 765

January, 1991



Introduction

This package contains one floppy disk and this Software Release Bulletin. The floppy disk is a MS-DOS bootable disk containing Level 765 Console Software and the programs used to assemble and maintain the CC598 System Consoles and the CC598 LCN Network Maintenance Station.

CC598 Support Package 5.25" Media PN 10322177 Rev. F
CC598 Support Package 3.5" Media PN 12168581 Rev. A

Copyright/Proprietary Software

This disk contains software copyrighted by Zenith Data Systems and Microsoft Corporation licensed to Control Data as well as Control Data proprietary software. Duplication in whole or part is prohibited. Additional copies may be ordered from SMD.

CSW Support

Problems with the console software should be reported on a PSR under the ident CSW. Specify the nature of the problem and include the level number on each PSR.

A replacement disk may be ordered by phone, by calling 612-482-3409.

Problems with the contents of this SRB should be reported to Central Software Support:

US/Canada 1-800-345-6628
All Other Countries 1-612-482-3434

Manual vs SRB

Where there is a difference between the information contained in this document and the 19003 System Console Operations and Maintenance Manual, the information contained here takes precedence.

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4	Hard Disk Initialization
5	Wren III Low Level Formatting
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8	HDI Part 1 Instructions
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New Features

New Console Model Support

A new 386SX base PC (CC598 Models D and E) has replaced the existing 286 base PC (Models A and B). The new models are interchangeable with the old. The D model replaces the A model on the CYBER 962 and 992. The E model replaces the B model on the CYBER 960 and 994. The new models also support 3.5" floppy media rather than the 5.25" floppy media. Support will continue for the old models.

Execution From Floppy Support

While waiting for a replacement hard disk, it is now possible to execute the console software from the floppy disk. Please refer to Page 3 on how to execute the console software from a floppy.

Partition Reduction

The number of partitions on the A and D models of the console have been reduced from three to two. Beginning with this release only two versions of CIP can be installed on these consoles.

Environmental Power Monitor Utility

For those CYBER 960 sites with the Environment Power Monitor installed, a utility has been developed to read and display information from the EPM without executing the Console Software.

CC598/CC545 Failure to Deadstart Problem

Sites configured with both the CC598 and the CC545 consoles could experience a failure to deadstart when pressing the deadstart button on the CC545. This problem has been identified and is fixed in this release.

How to Boot the Support Disk

With power applied to the console, insert the Support disk into the floppy drive and latch the door. Press the Ctrl-Alt-Ins keys. The console will display:

MFM-200 Monitor, Version X.x
Memory Size: 640K Bytes
Enter ? for help
->

Type BF and press the ENTER key. The following screen will appear.

CC598 Support Package

Refer to the Software Release Bulletin for additional information.

Quick Reference:

Install Console Software - Type INSTALL
Hard Disk Initialization Procedures
5.25" Floppy Console - Type HDI
3.25" Floppy Console - Type HDA
Wren III Low Level Format - Type LOW
Hostess Diagnostics - Type HOST
Install Advanced Emulation Package - Type INAEP
Execute Console Software from Floppy - Type FRUN
Execute Power Monitor Utility - Type EPMU

All entries must be followed by pressing the ENTER key

Enter the command for the procedure that you wish to execute. After entering the procedure command, a set of instructions will be displayed on the screen. Follow these instructions.

Note: If you have replaced the hard disk, disregard the 'controller is bad' error message when first applying power and before executing the HDI/HDA procedure.

Conventions

The term 'console' refers to any model of the CC598.

When the word 'press' is used, it means to press the named key(s).

When the word 'press' precedes a string of key names that are separated by hyphens, it means to press the keys simultaneously.

When the word 'type' is used, it means to type the word which follows.

Console Software Installation

To install the Console Software on the hard disk, type INSTALL and press the ENTER key. When the CDC logo appears on the screen, the installation is complete.

Advanced Emulation Package Installation

To install the Advanced Emulation Software on the hard disk, type INAEP and press the ENTER key. When the CDC logo appears on the screen, the installation is complete.

Console Software Execution from Floppy Disk

If the hard disk in the Model B or E console fails, full System operation can be maintained from the floppy disk. On these console models, the hard disk is used only to store the console software. Once initiated, the console software executes out of PC memory and does not require the hard disk's presence. To execute in this mode, boot the console from the floppy disk and type FRUN followed by pressing the ENTER key. The console software will execute just as if the console had been booted normally.

If the hard disk in the Model A or D console fails, limited System operation is possible. Since CIP resides on the hard

disk, deadstarting is not possible without an operational console hard disk. However, if the System is running and the hard disk fails, continued operation of the System is possible from the floppy.

To resume console operation (without a system interruption), remove the write protect from the Support disk and boot the console from the floppy. At the initial display, type FRUN and press the ENTER key.

The console software will execute from the floppy. At the Main Console Menu, type Ctrl-F5 (F5 = the F5 key). This sequence instructs the console software to recover a running System rather than perform the initialization sequence.

Environmental Power Monitor Utility Execution

The EPM utility is executed from the floppy disk. From the Support Disk's main menu, type EPMU. Information about EPMU is contained in Appendix A of this SRB.

Hard Disk Initialization - HDI



WARNING

Prior to executing this procedure, examine the System Configuration Information. Refer to the section on System Hardware Setup.

This procedure will destroy all data on the hard disk!

To execute the Hard Disk Initialization, type HDI and press the ENTER key. The following informational display will be presented.

Hard Disk Initialization Procedures for the CC598 Consoles

The CC598 console requires a two part process in order to prepare the disk.

A re-boot is required between the parts. To re-boot press the Ctrl-Alt-Ins keys.

When ready, press any key for the detailed instructions.

Hard Disk Initialization Procedures for the CC598-A/B/C Consoles

Part One:

For a CC598A type "A1" Then follow the instructions in the SRB *

For a CC598B/C Console type "B1"

Part Two:

For a CC598A Console type "A2"

For a CC598B Console type "B2"

For a CC598C Console type "C2"

All entries must be followed by pressing the Enter key

Select the procedure for your console model and type the command for the part that you are going to execute. All parts must be executed and be executed in order.

*Note : Instructions begin on Page 8.

Hard Disk Initialization - HDA



WARNING

Prior to executing this procedure, examine the System Configuration information. Refer to the section on System Hardware Setup.

This procedure will destroy all data on the hard disk!

To execute the Hard Disk Initialization, type HDA and press the ENTER key. The following informational display will be presented.

Hard Disk Initialization Procedures for the CC598 Consoles

The CC598 console requires a two part process in order to prepare the disk.

A re-boot is required between the parts. To re-boot press the Ctrl-Alt-Ins keys.

When ready, press any key for the detailed instructions.

Hard Disk Initialization Procedures for the CC598-D/E Consoles

Part One:

Type - "D1" and follow the instructions in the SRB *

Part Two:

Type - "D2"

All entries must be followed by pressing the Enter key

Wren III Low Level Format

There are no specific ground rules for when this procedure should be executed. Think of the Low Level format the same way that you think of formatting a CYBER disk and use it accordingly. Generally speaking, try this procedure on the disk prior to replacing it. It may fix the problem.



WARNING

This procedure performs a low level format on the Wren III. All information stored on or about the disk is lost.

The hard disk must be initialized using HDI after executing this procedure.

To execute the Wren III Low Level Format procedure, type LOW and press the ENTER key. The following informational screen will be presented.

Wren III Low Level Format Routine
This procedure performs a low level format on the Wren III. All information stored on or about the disk is lost.

Note: The light on the Wren III will not be on during this operation. DO NOT interrupt the formatting operation or the console will be unusable.

Press any key to start the format. The following format display will appear on the screen.

Version 2.13 - 9 November 1987
Controller is Generic
Base I/O Port Address is: 330
DMA Channel is: 1
Common Command Set Enabled

1 port: 340h
2 rt10-at
3 dma:hsdma
RT10-AT Adapter Assumed
4 dmachan: 5
5 tfr
tdr CDB is 00 00 00 00 00 00
Status: 00H
6 fd
fd CDB is 04 00 00 00 00 00

The following display will appear when the formatting is complete.

Common Command Set Enabled
1 port: 340h
2 rt10-at
3 dma:hsdma
RT10-AT Adapter Assumed
4 dmachan: 5
5 tfr
tdr CDB is 00 00 00 00 00 00
Status: 00H
6 fd
fd CDB is 04 00 00 00 00 00
Data Written:
Status: 00H
7 quit

A>

Hostess Diagnostics

To execute the Hostess Network Adapter diagnostics, type HOST and press the ENTER key.

Enter the following information as prompted by the diagnostic.

Hostess board base address:	Enter 140
System Clock Speed:	Select 2
Number of Ports:	Enter 8

As the diagnostic runs, you will be directed to install the test plug that is included in the Multiport Adapter package. Install the test plug on the port as you are directed.

Note: For additional information and explanations of any error message displayed, refer to the HOSTESS Multiport Network Adapter User's Guide which was shipped with your console.

System Hardware Setup - A, B, and C Models

The following describes how to reboot and reconfigure the console. With power applied to the console, insert the Support disk into the floppy drive and latch the door. Press the Ctrl-Alt-Ins keys. The console will display:

MFM-200 Monitor, Version 2.6E
Memory Size: 640K Bytes
Enter ? for help
→

Type **SETUP** and press the **ENTER** key.

The displays shown are generic. The locations of the items may be different on your console. This is due to the different models and levels of the BIOS ROMs installed. Make sure that the highlighted items in these displays match what is selected for your console. Use the arrow keys to move the cursor, the space/backspace key to select the values and the ESC key to exit when you are done. Follow the directions shown at the bottom of the display.

System Hardware Setup/Configuration Program																			
Time: 14:10:19 Date: 10/23/1990		Serial Port 1 (COM1): Enable Serial Port 2 (COM2): Enable																	
<table border="1"> <thead> <tr> <th></th> <th>BASE</th> <th>EXTENDED</th> <th>EMS</th> </tr> </thead> <tbody> <tr> <td>Main RAM:</td> <td>640K</td> <td>OK</td> <td>256K</td> </tr> <tr> <td>Add-On RAM:</td> <td>OK</td> <td>OK</td> <td>---</td> </tr> <tr> <td>Total:</td> <td>640K</td> <td>OK</td> <td>---</td> </tr> </tbody> </table>			BASE	EXTENDED	EMS	Main RAM:	640K	OK	256K	Add-On RAM:	OK	OK	---	Total:	640K	OK	---	Boot Drive: Floppy Drive 0 Floppy Drive 0: 5-1/4" 1.2M Floppy Drive 1: -Not Present-	
	BASE	EXTENDED	EMS																
Main RAM:	640K	OK	256K																
Add-On RAM:	OK	OK	---																
Total:	640K	OK	---																
Operating Speed: Slow Fast Smart		Hard Disk Drive 0: -Not Present-																	
Video Display: Enhanced Graphics Video Refresh Rate: 50 Hz 60 Hz		<table border="1"> <tr> <td>Cylinders:</td> <td>Heads:</td> </tr> <tr> <td>Ship Zone:</td> <td>Sectors:</td> </tr> <tr> <td>Precomp:</td> <td>Capacity:</td> </tr> </table>		Cylinders:	Heads:	Ship Zone:	Sectors:	Precomp:	Capacity:										
Cylinders:	Heads:																		
Ship Zone:	Sectors:																		
Precomp:	Capacity:																		
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Password Mode:	Prompt Continue																		
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Cylinders:	Heads:																		
Ship Zone:	Sectors:																		
Precomp:	Capacity:																		
Enter Current Time As HH:MM:SS In 24 Hour Format Use Space/Backspace to select values, Arrows to move, Esc when done																			

CC598-A

System Hardware Setup/Configuration Program																	
Time: 13:11:45 Date: 10/23/1990																	
<table border="1"> <thead> <tr> <th></th> <th>BASE</th> <th>EXTENDED</th> <th>EMS</th> </tr> </thead> <tbody> <tr> <td>Main RAM:</td> <td>640K</td> <td>OK</td> <td>256K</td> </tr> <tr> <td>Add-On RAM:</td> <td>OK</td> <td>OK</td> <td>---</td> </tr> <tr> <td>Total:</td> <td>640K</td> <td>OK</td> <td>---</td> </tr> </tbody> </table>			BASE	EXTENDED	EMS	Main RAM:	640K	OK	256K	Add-On RAM:	OK	OK	---	Total:	640K	OK	---
	BASE	EXTENDED	EMS														
Main RAM:	640K	OK	256K														
Add-On RAM:	OK	OK	---														
Total:	640K	OK	---														
Operating Speed: Slow Fast Smart																	
Video Display: Enhanced Graphics Video Refresh Rate: 50 Hz 60 Hz																	
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Password Control																	
Modify System Password:	No Change																
Password Verification:	XXXXXXXX																
New Password:	XXXXXXXX XXXXXXXX																
Password Mode:	Prompt Continue																
Serial Port 1 (COM1): Enable Serial Port 2 (COM2): Enable Boot Drive: Hard Disk Drive 0 Floppy Drive 0: 5-1/4" 1.2M Floppy Drive 1: -Not Present-																	
Hard Disk Drive 0: Drive Type 43																	
<table border="1"> <tr> <td>Cylinders:</td> <td>989</td> <td>Heads:</td> <td>5</td> </tr> <tr> <td>Ship Zone:</td> <td>988</td> <td>Sectors:</td> <td>17</td> </tr> <tr> <td>Precomp:</td> <td>0</td> <td>Capacity:</td> <td>43M</td> </tr> </table>		Cylinders:	989	Heads:	5	Ship Zone:	988	Sectors:	17	Precomp:	0	Capacity:	43M				
Cylinders:	989	Heads:	5														
Ship Zone:	988	Sectors:	17														
Precomp:	0	Capacity:	43M														
Hard Disk Drive 1: -Not Present-																	
<table border="1"> <tr> <td>Cylinders:</td> <td>Heads:</td> </tr> <tr> <td>Ship Zone:</td> <td>Sectors:</td> </tr> <tr> <td>Precomp:</td> <td>Capacity:</td> </tr> </table>		Cylinders:	Heads:	Ship Zone:	Sectors:	Precomp:	Capacity:										
Cylinders:	Heads:																
Ship Zone:	Sectors:																
Precomp:	Capacity:																
Enter Current Time As HH:MM:SS In 24 Hour Format Use Space/Backspace to select values, Arrows to move, Esc when done																	

CC598-B/C

System Hardware Setup/Configuration Program																	
Time: 14:00:33 Date: 10/23/1990																	
<table border="1"> <thead> <tr> <th></th> <th>BASE</th> <th>EXTENDED</th> <th>EMS</th> </tr> </thead> <tbody> <tr> <td>Main RAM:</td> <td>640K</td> <td>1024K</td> <td>288K</td> </tr> <tr> <td>Add-On RAM:</td> <td>OK</td> <td>OK</td> <td>---</td> </tr> <tr> <td>Total:</td> <td>640K</td> <td>1024K</td> <td>---</td> </tr> </tbody> </table>			BASE	EXTENDED	EMS	Main RAM:	640K	1024K	288K	Add-On RAM:	OK	OK	---	Total:	640K	1024K	---
	BASE	EXTENDED	EMS														
Main RAM:	640K	1024K	288K														
Add-On RAM:	OK	OK	---														
Total:	640K	1024K	---														
Operating Speed: Slow Fast Smart																	
Serial Port 1 (COM1): Enable Serial Port 2 (COM2): Enable																	
Parallel Port Assignment: LPT1:																	
Password Control: Make No Changes																	
<table border="1"> <tr> <td>Current Password:</td> <td>XXXXXXXX</td> </tr> <tr> <td>New Password:</td> <td>XXXXXXXX XXXXXXXX</td> </tr> <tr> <td>Password Mode:</td> <td>Prompt Noprompt</td> </tr> </table>		Current Password:	XXXXXXXX	New Password:	XXXXXXXX XXXXXXXX	Password Mode:	Prompt Noprompt										
Current Password:	XXXXXXXX																
New Password:	XXXXXXXX XXXXXXXX																
Password Mode:	Prompt Noprompt																
Video Display: Ext. Enhanced Video Video Refresh Rate: 50 Hz 60 Hz																	
Boot Drive: Hard Disk Drive 0 Floppy Drive 0: 3-1/2" 1.4M Floppy Drive 1: -Not Present-																	
Hard Disk Drive 0: Drive Type 56																	
<table border="1"> <tr> <td>Cylinders:</td> <td>965</td> <td>Heads:</td> <td>10</td> </tr> <tr> <td>Ship Zone:</td> <td>965</td> <td>Sectors:</td> <td>17</td> </tr> <tr> <td>Precomp:</td> <td>Off</td> <td>Capacity:</td> <td>84M</td> </tr> </table>		Cylinders:	965	Heads:	10	Ship Zone:	965	Sectors:	17	Precomp:	Off	Capacity:	84M				
Cylinders:	965	Heads:	10														
Ship Zone:	965	Sectors:	17														
Precomp:	Off	Capacity:	84M														
Hard Disk Drive 1: -Not Present-																	
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Cylinders:	Heads:																
Ship Zone:	Sectors:																
Precomp:	Capacity:																
Enter Current Time As HH:MM:SS In 24 Hour Format Use Space/Backspace to select values, Arrows to move, Esc when done																	

CC598-D/E

CC598A/D/E HDI/HDA Instructions Part 1

Introduction

Using the Zenith PART Utility, this procedure partitions the hard disk into two CIP partitions.

Execution

After typing 'A1' from the HDI display or D1 from the HDA display, the following screen will appear.

Part - Hard Disk Partitioning Utility
Copyright (c) 1989, Zenith Data Systems Corporation

The PARTutility helps you to change the arrangement of the MS-DOS Partitions on your hard disk drive. PART displays a table showing the types of each partition, the start cylinder, the end cylinder and the amount of disk space allocated to each partition.

CAUTION: Using PART can destroy all files on your hard disk drive. Do not use PART until you have transferred copies of your hard disk files to floppy disks.

Press ENTER or ESC to continue...

NOTE: Cylinder numbers that are highlighted (380) are to be substituted for the non-highlighted (360) numbers. The non-highlighted numbers are for the A model. The highlighted numbers are for the D and E models.

Press the Enter
Key

The display will be replaced with the main display as shown in the next column. Additions will be made to the main display as we proceed through this procedure.

PART - Hard Disk Partitioning Utility
Copyright (c) 1989, Zenith Data Systems Corporation
Version 3.30.06

Current hard disk unit selected (logical/physical) = 1 (80h)
Current Boot partition = NONE, Maximin Cyl/Heads/Sectors = 982/7/26
963/10/17



Select next hard disk partition
Display current hard disk partition
Add a MS-DOS hard disk partition
Delete a MS-DOS hard disk partition
Change the default MS-DOS boot partition
Exit PART and return to MS-DOS

Move to selection with arrow keys, press ENTER to Select or ESC to Quit

Main Display

Press the Down
Arrow key

Notice that the 'Select next hard disk partition' option is highlighted. Press the down arrow key until the 'Add a MS-DOS hard disk partition' option is highlighted.

Press the Enter
key

Pressing the ENTER key selects the 'Add a MS-DOS hard disk partition' option and causes the following window to open.

Add a Primary MS-DOS partition (BOOTABLE)
Add a Extended or Logical MS-DOS partition (NON-BOOTABLE)

Press the Enter
key

The 'Add a Primary MS-DOS partition (BOOTABLE)' option is highlighted. Pressing the ENTER key selects this option and causes the following window to open.

Enter size of new PRIMARY partition in cylinders or ESC to Quit[982]
[963]

Enter 360
380

This is the number of cylinders for the first partition. The window will change to:

Enter size of new PRIMARY partition in cylinders or ESC to Quit [360]
[380]

Press the Enter
key

Pressing the Enter key causes the first partition to be 360/380 cylinders. The screen will return to the main display as shown on page 8.

Press the Down
Arrow key

Notice that the 'Select next hard disk unit' option is highlighted. Press the Down Arrow key until the 'Add a MS-DOS hard disk partition' option is highlighted.

Press the Enter
key

Pressing the Enter key selects the 'Add a MS-DOS hard disk partition' option and causes the following window to open:

Add a Primary MS-DOS partition (BOOTABLE)
Add a Extended or Logical MS-DOS partition (NON-BOOTABLE)

Press the Enter
key

The 'Add a Primary MS-DOS partition (BOOTABLE)' option is highlighted. Pressing the Enter key selects this option and causes the following window to open:

Enter size of new PRIMARY partition in cylinders or ESC to Quit [622]
[583]

Enter 311
380

This is the numbers of cylinders for the second partition. The window will change to:

Enter size of new PRIMARY partition in cylinders or ESC to Quit [311]
[380]

Press the Enter
key

Pressing the Enter key causes the second partition to be 311/380 cylinders. The screen will return to the main display as shown on page 8.

Press the Down
Arrow key

Notice that the 'Select next hard disk unit' option is highlighted. Press the Down Arrow key until the 'Change the Default MS-DOS Boot partition' option is highlighted.

Press Enter key

Pressing the Enter key selects the 'Change default MS-DOS boot partition' option and causes the following window to open:

Select next hard disk unit					
Partition	Start	End	Cyls	Size(Mb)	
1) DOS(16)	0	359/379	360/380	33.53	31.53
2) DOS(16)	360/380	670/759	311/380	28.98	31.54
3) Un-used					
4) Un-used					
No default BOOT partition					

Press the Enter
Key

Notice that the first line of the window, 1)DOS(16)..., is highlighted. By pressing the Enter key, this partition is selected as the boot partition.

Examine the
Display

Notice that the 'Current Boot Partition = None' has changed to 'Current Boot Partition = 1'.

PART - Hard Disk Partitioning Utility
Copyright (c) 1989 Zenith Data Systems Corporation
Version 3.30.06

Current hard disk unit selected (logical/physical) = 1 (80h)
Current Boot partition = 1, Maximin Cyl/Heads/Sectors = 982/7/26
963/10/17

Select next hard disk partition
Display current hard disk partition
Add a MS-DOS hard disk partition
Delete a MS-DOS hard disk partition
Change the default MS-DOS boot partition
Exit PART and return to MS-DOS

Move to selection with arrow keys, press ENTER to Select or ESC to Quit

Verification

The following sequence is used to verify that the partitioning was successful.

Press the Down Arrow key

Press the Down Arrow key until the 'Display current hard disk partition' option is highlighted.

Press the Enter key

Pressing the Enter key selects the options and causes the following window to open:

Select next hard disk unit				
Partition	Start	End	Cyls	Size(Mb)
1) DOS(16)	0	359/379	360/380	33.53/31.53
2) DOS(16)	360/380	670/759	311/380	28.98/31.54
3) Un-used				
4) Un-used				
No default BOOT partition				

Press the Enter key

Before pressing the Enter key. Make sure that the display on the screen matches the screen shown above. Whether correct or incorrect, you must press the Enter key to proceed.

If Correct...

Press the Down Arrow key

Press the Down Arrow key until the 'Make change and REBOOT the system' option is highlighted.

Press the Enter key

Pressing the Enter key selects the option and causes the following window to open:

Are you sure that you want to (Y/N) :

Press the Y key

After pressing the Y key, the system will reboot. Proceed to HDI Part 2 on page 4.

If All is NOT Correct...

Press the Down Arrow key

Press the Down Arrow key until the 'Abort all changes and EXIT to MS-DOS' option is highlighted.

Press the Enter key

Pressing the Enter key selects the option and causes the window shown on the next page to open.

Are you sure that you want to Quit (Y/N) :

Press the Y key

After pressing the Y key, the system will return to the A> prompt. Since you aborted the PART utility, no changes have been made to the hard disk. To continue, start the HDI procedure over again by pressing the Ctrl-Alt-Del key.

Note: The PART utility records information on the hard disk. If you execute this utility and find out later that something is incorrect, you must run the procedure LOW before attempting to re-execute this procedure.

Appendix A - Environmental Power Monitor Utility (EPMU) Documentation

INTRODUCTION

EPMU is an Environmental Power Monitor Utility for the CYBER 960/962 Power Monitor. EPMU is a standalone utility with the following capabilities:

- read cyclic history buffer one,
- read and clear cyclic history buffer two,
- clear the EPM,
- set the EPM date and time.

RESTRICTIONS

EPMU can be loaded and executed only from the CC598 Support Disk (floppy).

LOADING PROCEDURES

EPMU can be loaded using any of the following procedures.

1. From the CC598 Support Disk menu, enter:

EPMU (cr)

2. From the MS-DOS A:> display, enter:

EPMU <software debug options> (cr)

NOTE: EPMU resides on the CC598 Support Disk (floppy). It does not reside on the console's hard disk. If executed from the MS-DOS A:> prompt, you must first be sure that you are in the correct MS-DOS directory. To get to the correct directory, enter:

cd \epmu

SOFTWARE DEBUG OPTIONS

The following parameters were developed as software debug tools and are not necessary for the normal execution of EPMU. They have been documented here for Tech Support and/or Engineering.

Option	Description
--------	-------------

- | | |
|---|---|
| m | The 'm' option provides additional error information other than that provided by the status window. For example, if the packet is not received, the 'm' option would cause EPMU to determine whether the start byte was not received or the utility timed out before the arrival of the stop byte. |
| i | The 'i' option provides general information about the function calls and program flow. For example, if EPMU were failing to execute, the 'i' option would give a general idea of where in the code the program was failing. It also shows the actual packet that was sent (function code, task number, packet sequence number, etc.) and received (start byte, size of data field, stuffed bits, etc.). |
| p | The 'p' option shows the packet activity. It also writes the activity to a compressed file on the floppy disk (log epm.pkt). This file is not readable without special hardware and software. If using this option, the floppy should be returned to Central Hardware Support for analysis. |

These options are invoked by loading EPMU as shown in the Loading Procedures, Method 2. More than one option can be invoked at the same time; i.e, EPMU m i p (be sure to include spaces between the options).

Execution with the options enabled does not necessarily follow the documentation contained in this manual. As stated above, these options are software debug options.

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RUNNING PROCEDURES

Upon execution, EPMU presents its' main menu to the user. It is through this menu that the user selects the tasks to execute.

Power Monitor Read-Out Utility
A: TASK 8 Read Cyclic Buffer #1
B: TASK 9 Read Cyclic Buffer #2
C: TASK 20 Reset EPM (including RAM memory)
D: TASK 22 Update Date/Time Information
STATUS:
Enter: Choose Highlight Option Ctrl-Alt-Del: Exit

Main Menu

Entering the Task Number

The task number can be entered by pressing the letter next to the task number or by using the arrow keys to highlight the task. If using the arrow keys, you must press the ENTER key after selecting the task number.

Exiting EPMU

It is recommended that EPMU be exited by re-booting the console (Alt-Ctrl-Del). However, the utility can be exited and the user returned to MS-DOS by pressing Alt-C.

Task Descriptions

Task 8 Read Cyclic Buffer #1

Task 9 Read and Reset Cyclic Buffer #2

Task 20 Reset the EPM including RAM memory

Task 22 Update the EPM's Date and Time Information

Refer to the PIP3 EPM Software ERS (A8609) for a complete description of these tasks. This document is part of the CYBER 960 Tech Support kit. Contact your local Tech Support office for further information about this kit.

NOTE: The EPM takes some time to reset. Therefore, Task 20 has a built-in delay of 10 seconds to permit the EPM time to reset. During this period you can still enter commands but the response to the commands will be delayed.

NOTE: If the ENTER key is held down while running either Task 8 or 9 and there are no errors in the buffers, you will see a 'Packet Sequence Mismatch' error. This is normal and the software will recover from it when you remove your finger from the ENTER key.

NORMAL MESSAGES (Status Area)

The following messages will appear in the status window during normal operation.

NO ERRORS IN CYCLIC BUFFER

There are no errors in the selected buffer.

EPM (INCLUDING RAM) HAS BEEN RESET

Task 20 successfully reset the EPM.

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DATE/TIME HAS BEEN UPDATED USING THE PC

Task 22 successfully set the EPM's date and time to match the console's date and time.

INVALID ENTRY

An invalid task was selected or a combination sequence of unsupported keys was entered.

ERROR MESSAGES (Status Area)

The following messages are displayed if EPMU encounters an error condition. Refer to the PC/AT I4 Console to I4A IOU Software Interface Specification, ARH7707, for further information about these errors. This document is part of the CYBER 960 Tech Support kit. Contact your local Tech Support office for further information about this kit.

COMMUNICATION ERROR

EPMU did not receive a response to a packet from the EPM.

- EPM is not powered up
- The cables are not properly connected
- The serial interface is inoperative (run the HOSTESS diagnostics)

PKT SEQUENCE NUMBER MISMATCH

The sequence number in the packet received by the EPM did not match the sequence number in the packet sent to the EPM.

PKT COMM ERR - XX

The EPM responded with a packet reject. EPMU appends an error code to the message.

XX =

- 01 Checksum error
- 02 Illegal Fcn Code
- 03 Pkt Too Long
- 04 Trans Error
- 05 Unauthorized Fcn
- 07 PP Error
- 0C Data Error
- 10 Abort Exchange
- 11 No Start Byte
- 12 Pkt Error
- 13 Timeout Error
- 14 Busy

NOTE: Once a packet has been rejected or the sequence numbers on the sent and received packets do not match, the information returned from the EPM is suspect. It is recommended that you restart EPMU.

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CYCLIC BUFFER DISPLAY

The following screen format is used to display the contents of the Cyclic Buffers.

Sequence Number		Task Executed		Digital Circuitry
Cyclic Buffer #1				
Seq #	Date	Time	Error	Description
00	90/10/16	12:00:01:10	90 DIG	Breakers Off in IOU >= 1
01	90/10/16	12:01:50:00	63 CAB	Mem +5.0V PS overcurr
		Error Code	Cabinet Circuitry	
ESC: Main Menu Pg Up Pg Dn Up Down				
Option Box				

Refer to the PIP3 EPM Software ERS (A8609) for a complete description of these tasks. This document is part of the CYBER 960 Tech Support kit. Contact your local Tech Support office for further information about this kit.

Sending the Buffer (display) to a File

Pressing the Alt-F1 keys will copy the displayed screen to a file on the floppy - BUFFER.TXT. This file is a text file.